



Impact of Coronavirus Outbreak on Changing Educational Patterns of Student and Teachers at Onaizah and Buraydah Private Colleges in Saudi Arabia - A Cross-Sectional Study

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ABSTRACT

Introduction: Covid-19 affected higher education institutions worldwide.

Aim: This article identifies opportunities based on the need for change in the delivery of educational instruction resulted from the COVID-19 pandemic in the context of private colleges in Saudi Arabia.

Methods: Cross sectional study was conducted among 151 college students from two campuses of Buraydah Private colleges from March to July 2020. A self-administered questionnaire was provided online to all the students' as a web link composed of several questions on sociodemographic information, opinion of students regarding online classes, agreement levels of students on live sessions vs recorded sessions, testing availability of functioning internet service "networking technology" at home (WiFi, data bundle) helping you for distance teaching, identify the maximum number of hours one can stay motivated and follow the session, examine the ability of students to concentrate at home while studying, assess different approaches in facilitating learning experiences.

Results: Study findings showed 57 (37.7%) were males with mean age of 26.3 and 94 (62.3%) were females with mean age of 27.5. Majority of students were single 91 (60.3%), 60 (39.7%) were married. Majority of the students had functioning internet services 126 (84%) at their homes which help them for distance teaching and 16% did not had the internet service. Many agreed that they were satisfied with interaction received before the launching of the online classes by the tutors, but results were not found significant among students of different departments.

Conclusion: The study findings showed acceptable results showing that respective private colleges of Saudi Arabia provided good online support and orientation regarding COVID 19 crisis and students practiced good time management skills with online sessions.

Key Words: E-learning, Private College, COVID-19, Saudi Arabia, Education, Assessment, Evaluation

INTRODUCTION

Worldwide the coronavirus disease (COVID-19) has impacted college-going students. Students want to have a regularity in their academic roles with the best performance in their evaluations and examinations, they want to be prepared to provide the best services after they have graduated in their respective fields. But in this current crisis of a pandemic, this starts with finding the best way to educate them. It begins with understanding the opportunities that professors, teachers, and medical college authorities have at their fingertips and using all the resources, considering the barriers that COVID-19 has created. The Coronavirus pandemic has im-

acted education systems all over the world, contributing to the widespread closing of schools in the affected countries.¹

Updating content material may be a boost to the online environment and virtual activities may seem usable, but the outcome of these changes will require periodic assessment and evaluation. Saudi Arabia's private institution's preparations should be extensively studied in terms of their technical, technological, and psychosocial capacities and the growth to cope with this trend. This transition from a college setting to home results in isolation increased email usage and challenges to establish boundaries between work and home that could impact teachers, students, and employee support.

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Social distancing is the most effective prevention technique since COVID-19 emerged pending development of a vaccine, treatment, or both.² This prevents students from meeting in learning studios, lecture halls, or small group spaces. Most teachers have been flipping the classrooms past few years by providing “anytime/anywhere” individualized training for interactive learning. However, students also came together for experiences with small groups, laboratory sessions, simulations, and technology sessions, as well as clinical guidance for structured patient procedures and practical patient care environments.³

In the literature, several e-learning resources and online learning methods were employed as effective tools and methods for extending the possibilities of teaching and learning in the fields of the higher education. It was evident that e-learning in terms of the gain of information and performance of students is equivalent to traditional classroom methods. E-tools make up the language of future generations. In response to COVID-19, the faculty of private colleges quickly moved the entire program to electronic formats. Small-group configurations convene online in virtual team environments, and technological expertise sessions may take place online or maybe postponed in certain situations. Examinations have also shifted to electronic setups.² It mandates that Saudi Arabia’s educational institutions shift their educational model from embracing technology to changes in instruction and pedagogy.⁴

Therefore, this research paper is intended to explore and assess the changing pattern of education system affecting the learning and the teaching styles at a private college in Saudi Arabia during the times of pandemic. This study will not only be appropriate to address the educational issues effectively for private college students of Saudi Arabia during this current crisis but will also help to lay the groundwork for teaching in future disasters and beyond.

The purpose of the study was to find and evaluate the impact of the Covid-19 pandemic crisis on changing the learning and teaching patterns of students and teachers in a private college set up in Saudi Arabia.

MATERIALS AND METHODS

A cross-sectional study was conducted among Onaizah colleges and Buraydah private colleges, in Saudi Arabia by developing a survey questionnaire followed by sending this questionnaire to a biostatistician and education expert for review. The questionnaire was modified according to their suggestions (Appendix-1). For validity and reliability, the questionnaire was pretested on 12 students from each campus who belong to a different department. Cronbach’s alpha was calculated for the totality of items of this survey and was (151) which indicates high internal consistency. The ques-

tionnaire composed of sociodemographic characteristics of participants, study habits assessment including their teacher engagement and student-teacher interactions, assessment of distance teaching approaches such as availability of internet services at home, the usefulness of live sessions or recorded videos, number of hours one can attend the sessions and stay motivated, assessment of academic performance, evaluation of respondents experience and technical infrastructure, of respondents, and their coping with COVID-19 crises.

After Institutional Review Board (IRB) approval, the study sample was selected from college students from these two campuses of Buraydah Private colleges, in Saudi Arabia and conducted from March to July 2020. A self-administered questionnaire was provided online to all the students’ as a web link. The participants of the study included students from second to six years, both male and female. Informed consent was obtained from each participant registered to the survey. The questionnaire contained 3 sections with a total of 18 items (Appendix-1).

A total of 9 questions were formulated using the 3-points Likert scale, a total of 2 questions based on Yes/No, the remaining 2 were open ended questions. Sociodemographic variables, attitudes toward E-learning were independent variables while personal E-learning preparedness and experience impact were the outcome variables. For each question based on the 3-points Likert scale, respondents chose options from strongly agree, agree, and disagree. and were scored between 1 for disagree and 3 for disagree. Assessment was performed using different parameters affecting college students education patterns during the pandemic time including getting the opinion of students regarding online classes, agreement levels of students on live sessions vs recorded sessions, testing availability of functioning internet service “networking technology” at home (WiFi, data bundle) helping you for distance teaching, identify the maximum number of hours one can stay motivated and follow the session, examine the ability of students to concentrate at home while studying, assess different approaches in facilitating learning experiences.

Data analysis

The sample size was computed by using SPSS program version 25 for Windows (SPSS, Inc, Chicago, IL, USA). Chi-Square test used for the correlation coefficient to assess the relationship between different variables in our survey. A p-value of less than ≤ 0.05 is statistically significant. A comparative mean analysis method was used for interpretation of study results. Privacy and confidentiality were maintained throughout the study.

RESULTS

There were 151 students from the Buraydah Private college, main campus and Onaizah campus, participated in this study

as shown in Table 1; Of them 57 (37.7%) were males with mean age of 26.3 and 94 (62.3%) were females with mean age of 27.5. Majority of students were single 91 (60.3%), 60 (39.7%) were married (Figure 1). Students from all academic levels were included in the study except first year. College students of Onaizah campus were 85 (56.3%) while from Buraidah 66 (43.7%) students participated in the study. Language and translation department students were high in number who responded 63 (41.7%) followed by HRM department students 48 (31.8%), and least were from law department 40 (26.5%).

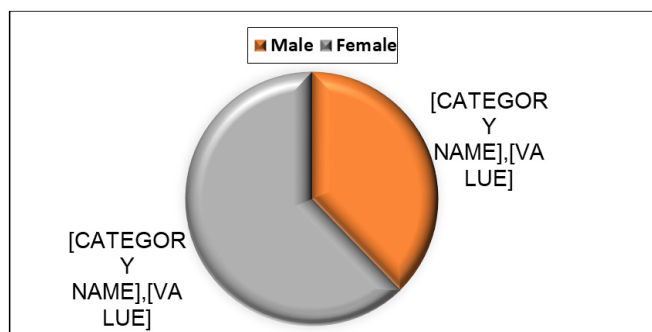


Figure 1: Gender of Respondents.

Table 1: Socio-demographic characteristics of the study participants

Characteristics	Frequency	Percent
Gender		
Male	57	37.7
Female	94	62.3
Marital status		
Married	60	39.7
Single	91	60.3
College		
Onaizah	85	56.3
Buraidah	66	43.7
Department		
Languages and Translation	63	41.7
HRM	48	31.8
Law	40	26.5
Total	151	100.0
Mean Age \pm SD		
Male	26.26 \pm 5.8	
Female	27.49 \pm 8.9	
Total	26.72 \pm 7.15	

Findings from Table 2 showed majority of the students 118(78.1%) from all 3 departments strongly agreed that teachers were doing their best to smoothen transition from offline classes to online classes under the current circumstances of COVID-19. Many agreed 83(55.1%) that they were satisfied with interaction received before the launching of the online classes by the tutors, but results were not found significant among students of different departments (p-value 0.707). About 71 (47%) of the students agreed that 'they know what the teachers expect them to do in their courses' while few students (11.3%) disagreed. Most of the students 56 (37.1%) believed that there is too little interaction between teachers and students with the online classes. Table 2 findings on opinion of students regarding online classes showed approx. 60% students agreed that they felt overwhelmed by the amount of work they had to do at the moment and wished they would have received more feedback from the teachers on how much progress they were making. 52.3% of the students felt that college made an appropriate change when shifting to online study. There were no significant association observed among different department student's opinion on maintaining concentration on study materials while attending lectures from home (p=0.800) and maintenance of good time management to help achieve academic goals (p=0.896).

Table 2: Opinion of students regarding online classes

	Strongly Agree	Agree	Disagree	Total
Q.1 Overall, I feel the teachers are doing their best to smooth the transition from (offline) classroom teaching to (online) distance teaching under the current circumstances (COVID-19)				
Languages and Translation	49 (77.8%)	13 (20.6%)	1 (1.6%)	63 (100%)
HRM	38 (79.2%)	9 (18.8%)	1 (2.1%)	48 (100%)
Law	31 (77.5%)	8 (20.0%)	1 (2.5%)	40 (100%)
Total	118 (78.1%)	30 (19.9%)	3 (2.0%)	151 (100%)
Chi-Square, P-value		0.165	0.992	
Q 2. You are satisfied with interaction received before the commencement (launching) of the online classes by the tutor(s):				
Languages and Translation	35 (55.6%)	25 (39.7%)	3 (4.8%)	63 (100%)
HRM	25 (52.1%)	22 (45.8%)	1 (2.1%)	48 (100%)
Law	23 (57.5%)	14 (35.0%)	3 (7.5%)	40 (100%)
Total	83 (55.1%)	61 (40.9%)	7 (4.6%)	151 (100%)
Chi-Square, P-value		2.15	0.707	

Q.3 I know what the teachers expect me to do in their course

Languages and Trans-lation	30 (47.6%)	27 (42.9%)	6 (9.5%)	63 (100%)
HRM	26 (54.2%)	17 (35.4%)	5 (10.4%)	48 (100%)
Law	15 (37.5%)	19 (47.5%)	6 (15.0%)	40 (100%)
Total	71 (47.0%)	63 (41.7%)	17 (11.3%)	151 (100%)

Chi-Square, P-value 2.79 0.599

Q 4. I think there is too little interaction between the teachers and students at the moment

Languages and Trans-lation	18 (28.6%)	23 (36.5%)	22 (34.9%)	63 (100%)
HRM	16 (33.3%)	18 (37.5%)	14 (29.2%)	48 (100%)
Law	8 (20.0%)	15 (37.5%)	17 (42.5%)	40 (100%)
Total	42 (27.8%)	56 (37.1%)	53 (35.1%)	151 (100%)

Chi-Square, P-value 2.53 0.63

Q 5. I wish I would receive more feedback from the teachers on how much progress I make

Languages and Trans-lation	23 (36.5%)	27 (42.9%)	13 (20.6%)	63 (100%)
HRM	22 (45.8%)	17 (35.4%)	9 (8.8%)	48 (100%)
Law	16 (40.0%)	18 (45.0%)	6 (15.0%)	40 (100%)
Total	61 (40.4%)	62 (41.1%)	28 (18.5%)	151 (100%)

Chi-Square, P-value 1.582 0.812

Q 6. I feel overwhelmed by the amount of work I have to do at the moment

Languages and Trans-lation	23 (36.5%)	30 (47.6%)	10 (15.9%)	63 (100%)
HRM	19 (39.6%)	16 (33.3%)	13 (27.1%)	48 (100%)
Law	10 (25.0%)	22 (55.0%)	8 (20.0%)	40 (100%)
Total	52 (34.4%)	68 (45.0%)	31 (20.5%)	151 (100%)

Chi-Square, P-value 5.51 0.232

Q 7. I think my college made an appropriate change when shifting to online study

Languages and Trans-lation	28 (44.4%)	34 (54.0%)	1 (1.6%)	63 (100%)
HRM	31 (64.6%)	15 (31.3%)	2 (4.2%)	48 (100%)
Law	20 (50.0%)	17 (42.5%)	3 (7.5%)	40 (100%)
Total	79 (52.3%)	66 (43.7%)	6 (4.0%)	151 (100%)

Chi-Square, P-value 7.52 0.109

Q 8. I could maintain my concentration on study materials while attending lectures while studying from home

Languages and Trans-lation	25 (39.7%)	31 (49.2%)	7 (11.1%)	63 (100%)
HRM	15 (31.3%)	25 (52.1%)	8 (16.7%)	48 (100%)
Law	16 (40.0%)	20 (50.0%)	4 (10.0%)	40 (100%)
Total	56 (37.1%)	76 (50.3%)	19 (12.0%)	151 (100%)

Chi-Square, P-value 1.63 0.800

Q 9. I practiced good time management which helped me achieve my academic goals

Languages and Trans-lation	27 (42.9%)	32 (50.8%)	4 (6.3%)	63 (100%)
HRM	20 (41.7%)	26 (54.2%)	2 (4.2%)	48 (100%)
Law	19 (47.5%)	20 (50.0%)	1 (2.5%)	40 (100%)
Total	66 (43.7%)	78 (51.7%)	7 (4.0%)	151 (100%)

Chi-Square, P-value 1.092 0.896

Findings from Table 3 showed majority of the students had functioning internet services 126 (84%) at their homes which help them for distance teaching and 16% did not had the internet service. About 53 (35%) students said they can stay motivated for 1 hour and follow sessions, while only 10(6.6%) said they can stay motivated for 2 hours and follow the sessions. About 115 (76%) of the students said “yes” for live sessions were better than recorded sessions while 36(24%) said “yes” for recorded sessions shown in figure 2. There was no significant difference observed among students based on usefulness of different approaches such as live classes, offline recorded sessions, online classes/meetings, and online/offline recorded sessions in facilitating learning experience ($P=0.265$). 77 (51.7%) students of different departments preferred online classes/meetings, while only 43 (28.5%) preferred online/offline recorded sessions.

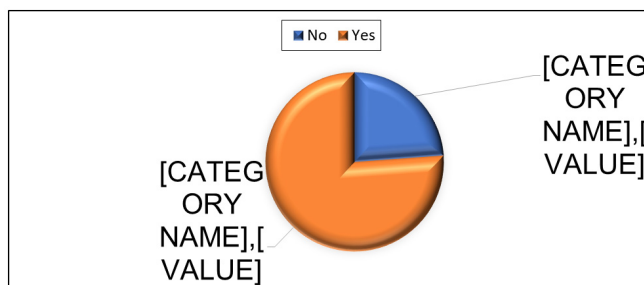


Figure 2: Comparison of live sessions better than recorded sessions (yes/no).

Table 3: Availability of internet services, motivation, usefulness of different approaches in facilitating learning experience and success, opinion on comparison of live sessions vs recorded sessions

Q.1 Do you have available functioning internet service "networking technology" at home (WIFI, data bundle) helping you for distance teaching?					
	Yes	No	Total		
Languages and Translation	55 (88.9%)	7 (11.1%)	63 (100%)		
HRM	41 (85.4%)	7 (14.6%)	48 (100%)		
Law	30 (75.0%)	10 (25.0%)	40 (100%)		
Total	126 (84.1%)	24 (15.9%)	151 (100%)		

Q 2. How useful do you consider the following approaches to facilitate your learning experience and success? Please rank-order approaches according to your personal preference.					
	Live classes	Offline recorded	Online classes/ meetings	Online/ Offline/ recorded	Total
Languages and Translation	0 (0 %)	9 (14.3%)	36 (57.1%)	18 (28.6%)	63 (100%)
HRM	0 (0 %)	11 (22.9%)	20 (41.7%)	17 (35.4%)	48 (100%)
Law	1 (2.5%)	10 (25.0%)	21 (52.5%)	8 (20.0%)	40 (100%)
Total		30 (19.9%)	77 (51.7%)	43 (28.5%)	151 (100%)
Chi-Square, P-value	1 (0.7%) 7.64	0.265			

Q.3 Considering the live sessions, you have had so far: what is the maximum number of hours you can generally stay motivated and follow the session?							
	30 min	45 min	60 min	75 min	90 min	120 min	Total
Languages and Translation	13 (20.6%)	20 (31.7%)	19 (30.2%)	2 (3.2%)	4 (6.3%)	5 (7.9%)	63 (100%)
HRM	1 (2.1%)	18 (37.5%)	19 (39.6%)	3 (6.3%)	3 (6.3%)	4 (8.3%)	48 (100%)
Law	8 (20.0%)	12 (30.0%)	15 (37.5%)	3 (7.5%)	1 (2.5%)	1 (2.5%)	40 (100%)
Total	22(14.6%)	50 (33.1%)	53 (35.1%)	8 (5.3%)		10(6.6%)	151 (100%)
					8 (5.3%)		

Q 4. The live session is better than recorded session?		
	Frequency	Percent
No	36	23.8
Yes	115	76.2
Total	151	100.0

DISCUSSION

Despite the COVID-19 predicaments, educational counter-measures are being taken to continue educating the college students. This study examined the effect of the covid-19 pandemic on learning among Buraydah Private college students of Saudi Arabia. The study findings showed acceptable results showing that private college of Saudi Arabia provided good online support and orientation regarding COVID 19 crisis and students practiced good time management skills with online sessions. While this study showed no significant association of student's opinions on online classes, as well as perceived value of using different e-learning methods to facilitate learning and academic success among college students of private institute. To our knowledge, this is the first time this study has been conducted to assess the impact of COVID-19 pandemic in college students' education system.

Several countries effectively slowed coronavirus spread by taking drastic steps that included banning public meetings and closing schools until further notice. Although the closure of schools is an effective way to reduce the spread of the virus, it has come up with its own challenges. The cross-sectional online survey was prepared to explore and assess the impact of COVID-19 global pandemic crisis on changing educational patterns among 151 students of Buraydah Private college, main campus and Onaizah campuses from 3 different departments i.e. language and translation, human resource management and law. About 78.1% college students from different departments participants in the study reported that they were happy with the teacher's transition from offline classes to online classes during Covid-19 circumstances. Some universities around the world endorse e-learning as a teaching method, and it is widely supported by the learners, considering the use of e-learning in the educational process is uniquely effective.^{5,6} There are also reports on comparing face-to-face instruction with e-learning. In one of the papers presented at a mobile learning conference in Singapore it was reported that e-teaching technique limits student-teacher interaction.⁷ This result was consistent with our research where 37 percent of students thought e-teaching had restricted student-teacher interaction along with approx. 45 percent of college students reported feeling overwhelmed by the amount of work they had to do at the moment and wished they would have received more input about how much progress they had achieved from teachers. These are some drawbacks with many e-learning benefits, such as social isolation, lack of interaction between the student-teacher and communication issues, etc.^{8,9}

Besides that, findings showed that more than 50 percent of college students from different departments indicated that their institutes provided sufficient online support and guidance regarding the Covid-19 pandemic crisis. The researchers have stated that institutional support for the adoption of

e-learning is significant at all levels. Top-down implementation, according to some studies, is a significant and more sustainable strategic step from the administrative to the consumer level.^{10,11} Further, 47 percent of study participants showed that they were able to fulfill their teachers' expectations in online courses with 50 percent agreeing that they could maintain focus on study materials while attending home lectures and practicing good time management skills that helped them achieve their academic objectives. Students have a positive attitude towards e-learning as one of the studies suggests, as they find the system easy to use and useful for their work on the course. And they get many benefits from e-learning, it helps them to better manage the learning process and to efficiently use modern teaching tools.¹² Several other studies also indicated various reasons for its overall acceptability as being its ease of use, flexibility and better environmental control, especially applicable to learners.^{8,9}

In addition, computer and internet access are the main learning / instructional resources for online learners.¹³ The related questions were asked to the college students to check for e-learning readiness along with the motivation of the student, and opinion on comparison of live sessions vs recorded sessions. In their homes, most of the students had internet services that supported them with distance learning. In some research, it is argued that the attitude towards 'students' e-learning can be measured in the following dimensions: study habits, skills, motivation, and their conduct of time management.^{13,14} It was found that only 17 percent of students remained motivated and followed sessions for more than one hour in the present study. Measuring student attitude therefore has a major role to play in assessing their behavior. Findings from the study also identified online classes / meetings as more important approach to promote learning experiences and progress for college students compared to offline recorded sessions, online recorded sessions, and live classes. Similarly, a majority of students from all 3 departments referred to live sessions while comparing live sessions vs recorded sessions. These findings go along with study suggesting that increase educational status has a positive influence on e-learning readiness.¹⁵

Findings from the current study suggest some important considerations that should be considered when planning to implement e-learning at private colleges in times of severe emergencies, such as Covid-19. Factors including economic, gender and cultural issues require further research, particularly when evaluating the organizational capacity to address changing educational demands. However, in the present study only one private college had been surveyed, further extension of survey to all private universities of Saudi Arabia should be made. In addition, the students' geographical and academic backgrounds were considered inhomogeneous, and this may have influenced their understanding and perceptions as a confounding variable in

answering the questions. Students from different departments were included in the online survey which further adds to variability into the study results. The discussion on the implementation of technology in education spotlights largely on students' perspective rather than on teachers' view. All in all, the findings of this study can be improved as a part of a detailed strategy for most private college students in the coming years to increase the scope and quality of their e-learning programs.

CONCLUSION

Based on the experiences of the authors, research, academic observations, guidelines for COVID-19, and the need for alternative solutions, this article introduced impact of Covid-19 on private college students and how they can respond to future challenges. This article proposes that private academic institutions should further replicates this study and document the pandemic's effect on the changing educational system in private colleges of Saudi Arabia to increase the validity of the study findings.

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Conflict of interests

None declared.

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